Plant Pathology Circular No. 96
July 1970

Fla. Dept. of Agr. and Cons, Serv.
Division of Plant Industry

CROWN ROT OF GLOXINIA[1]

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Gloxinia, Sinningia speciosa Benth. and Hook., is known to be affected with a crown rot disease caused by Phytophthora cryptogea Pethy, and Laff. The first reported occurrence of this disease in the United States was made in a preliminary report from California in 1939 by Middleton and Tucker (1), who definitely established in subsequent work the pathological relationship of P. cryptogea to gloxinia (2). The fungus also attacks and infects the stems, roots, and corms.

Crown rot of gloxinia was first found in Florida in 1955. Since that time reports of its occurrence have been sporadic and the disease appears to be associated primarily with greenhouse-grown plants.

The host range of P. cryptogea includes 9 genera and 15 species of the Gesneriaceae in addition to gloxinia (2). Other host plants include alfalfa, vetch, pear, cherry, peach, chick pea (garbanzo), and sesbania, as well as tomato, aster, marigold, snapdragon, daisy, common calla, and zinnia (4).

SYMPTOMS. The symptoms of the disease are a general stunting and wilting of the plant. Infected leaves show a water-soaked, dark brown to black lesion starting either at the tip or at the base and rapidly progressing from the initial site of infection. The leaves soon become flaccid and collapse. Infected stems have water-soaked, sunken lesions which soon envelop the entire stem and infection quickly progresses into petioles and leaves (Fig. 1). Diseased roots are discolored, water-soaked, and necrotic. Corms, when infected, exhibit dark brown,

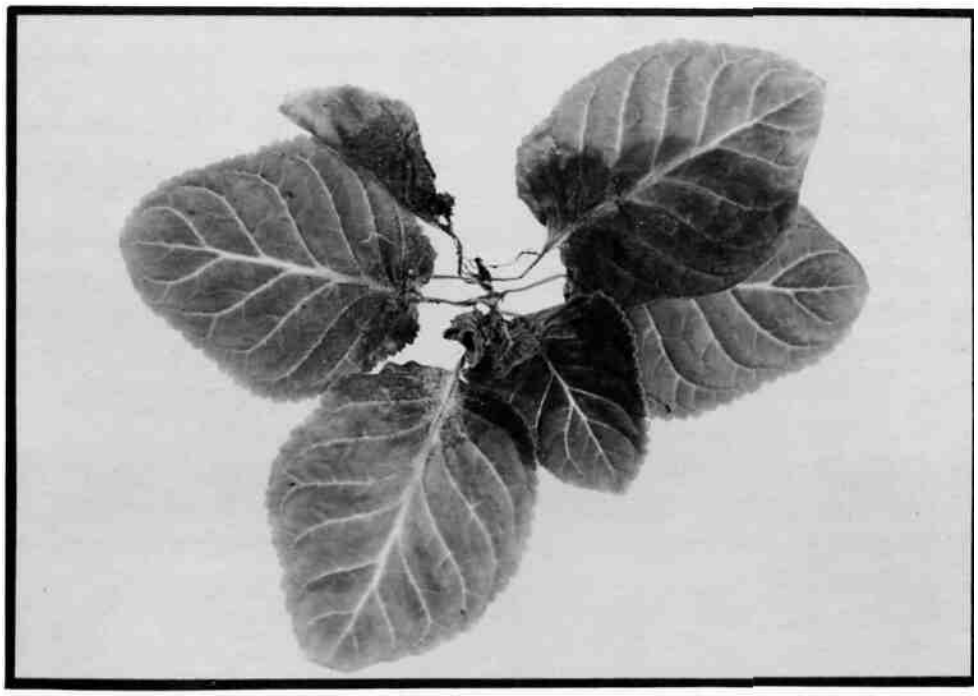

Fig. 1. Crown rot of gloxinia showing necrotic stem and crown with infection progressing into basal leaf areas.

[1]Contribution No. 270, Bureau of Plant Pathology

[2]Unpublished information. Bureau of Plant Pathology, DPI, FDACS

soft, recessed necrotic areas on the surface which may progress internally. Infected plants succumb rapidly under conditions favorable for disease development, i.e., high moisture and high temperatures (72-77 F).

CONTROL. Disease control measures are directed primarily at exclusion and eradication. Propagating plants from seed in sterilized soil is desirable. If corms are used for propagation, only disease-free stock should be selected for planting. Infected plants should be rogued and discarded. In preliminary disease control trials captan applied at the rate of 3 lb per 100 gal water offered promising results (3).

Literature Cited

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